

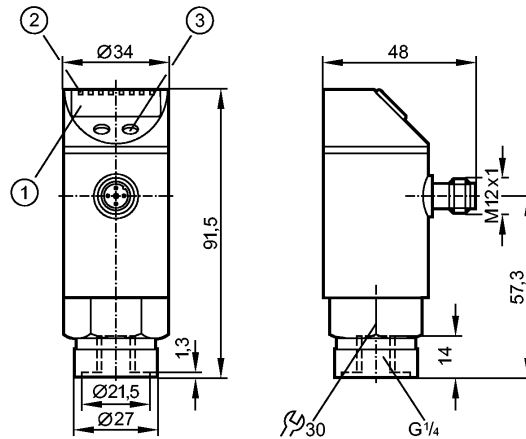


# PE3009

PE-1-1BRDR14-MFPKG/US/ /E



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



## Product characteristics

Combined pressure sensor  
 Quick disconnect  
 Sealing of the measuring cell: EPDM  
 Function programmable  
 Process connection: G 1/4 I  
 Switching output, Analog output  
 4-digit alphanumeric display  
 Measuring range: -1000...1000 mbar

## Application

Application	Type of pressure: relative pressure Liquids and gases Cannot be used for oils
Pressure rating [mbar]	20000
Bursting pressure min. [mbar]	50000
Medium temperature [°C]	-25...80

## Electrical data

Electrical design	DC PNP
Operating voltage [V]	18...36 DC <sup>1)</sup>
Current consumption [mA]	< 50
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Overvoltage protection [V]	up to 40 V

## Outputs

Output	Switching output, Analog output
Output function	normally open / closed programmable; 4...20 mA or 0...10 V
Current rating [mA]	250
Voltage drop [V]	< 2
Short-circuit protection	yes (non-latching)



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Switching frequency	[Hz]	≤ 170
Analog output		4...20 mA / 0...10 V
Max. load	[Ω]	4...20 mA: max. 500 / 0...10 V: min. 2000

Measuring / setting range		
Display unit		mbar, kPa, psi, inHg
Measuring range	[mbar]	-1000...1000
Setting range		
Set point, SP	[mbar]	-970...1000
Reset point, rP	[mbar]	-980...990
in steps of	[mbar]	10
Factory setting		SP1 = -500 mbar; rP1 = -540 mbar

Accuracy / deviations		
Accuracy / deviations (in % of the span)		
Switch point accuracy		< ± 0.5
Characteristics deviation *)		< ± 0.25 (BFSL) / < ± 0.5 (LS)
Hysteresis		< ± 0.25
Repeatability **)		< ± 0.1
Long-term stability ***)		< ± 0.05
Temperature coefficients (TEMPCO) in the temperature range -20...80° C (in % of the span per 10 K)		
Greatest TEMPCO of the zero point		0.2
Greatest TEMPCO of the span		0.2

Reaction times		
Power-on delay time	[s]	0.3
Delay time programmable dS, dr	[s]	0; 0.2...50
Response time analog output	[ms]	< 3
Integrated watchdog		yes

Software / programming		
Programming options		hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit; current / voltage output
Adjustment of the switch point		Programming button

Environment		
Ambient temperature	[°C]	-20...80
Storage temperature	[°C]	-40...100
Protection		IP 67

Tests / approvals		
EMC		EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V
Shock resistance		DIN IEC 68-2-27: 50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6: 20 g (10...2000 Hz)
MTTF	[Years]	213

Mechanical data		
Process connection		G ¼ I
Materials (wetted parts)		stainless steel 316L / 1.4404; ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); EPDM



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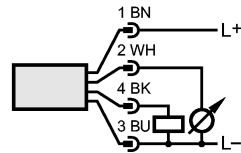
Pressure sensors

Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.263

Displays / operating elements	
Display	Display unit 4 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

### Wiring



Remarks	
Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in % of value of measuring range / 6 months

Pack quantity [piece]	1
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